Remarks

Reconsideration of the above-identified patent application in view of the amendments above and the remarks following is respectfully requested.

Claims 21-48 are currently pending in this application. Claims 21-22, 26-29, and 33-34 have been rejected under 35 USC § 102(b). Claims 23-24, and 30-31, have been rejected under 35 USC § 103(a). Claims 25 and 32, have been rejected under 35 USC § 103(a). Claims 35-36 and 40-41 have been rejected under 35 USC § 103(a). Claims 37-38 have been rejected under 35 USC § 103(a). Claim 39 has been rejected under 35 USC § 103(a). Claims 42-43 and 47-48, have been rejected under 35 USC § 103(a). Claims 44-45 have been rejected under 35 USC § 103(a). Claim 46 has been rejected under 35 USC § 103(a). Claim 42 has been objected to. Independent claims 21, 28, 35, and 42 have been amended.

The claims before the Examiner are directed toward a data access engine, computerized system, and method for increasing a level of efficiency of a network server. Data access engine located in first data processing machine is capable of communication with at least one pseudo server located in a second data processing machine (i.e. LAN server). The physical separation between data access engine and the server logic and user interface of pseudo server is a distinguishing characteristic of the invention. Any request for a subset of data stored in data access engine must be routed through at least one pseudo server.

§ 102(b) Rejections - Vermeulen

The Examiner has rejected claims 21-22, 26-29, and 33-34 under 35 USC § 102as being anticipated by Vermeulen US 2001/0042171 A1. The Examiner's rejection is respectfully traversed.

The separation of code in the present invention between the data access engine 22 and the pseudo server 28, and in particular the inclusion of server logic and user interface on the pseudo server 28 is a distinguishing characteristic of the current invention.

The Examiner compares the "server logic module" in the "pseudo server" of the current invention to Vermeulen's "control program" in the "proxy server" (Vermeulen's 12). The objective of Vermeulen's control program is to accept file requests from a client and return files to a client. The capabilities of prior art server (0 in FIGURE 1 of the current application) of Vermeulen (Vermeulen's 14) include user interface and data access engine capabilities (3 and 5 of FIGURE 1 of the current application). In contrast, the architecture of the current invention is partitioned into a data access engine 22 (prior art 5), responsible for data storage and retrieval, and a pseudo server such as pseudo server 28. Pseudo server 28 handles file serving (via server logic module) (Vermeulen's proxy server 12) and the other functions of the prior art server (0) (3 of FIGURE 1 of the current application). In particular, pseudo server 28 includes a user interface as described at least on page 7, lines 5-8:

"Users operating user clients (not pictured) within LAN 32 interact with a user interface, preferably a graphical user interface (GUT) of pseudo server 28 installed locally on LAN server 26. This allows rapid response in formulation of queries or requests directed to the GUI."

The present invention includes a server logic module and user interface which have been physically separated from a data access engine, as recited on page 6 lines 25-26 "The physical separation between data access engine 22 and the server logic and interface of pseudo server 28 is a distinguishing characteristic of the invention." The functions of the pseudo server are not limited to file requests and file transfers. The pseudo server includes a user interface, as described on page 7 lines 6-7 "... a user interface, ... of pseudo server 28 ..." which "...allows rapid response..." from

the server logic, which is a "...significant improvement with respect to prior art alternatives where all interact[ion] was with a remote server logic interface 3 located on a conventional server 0..." The server logic is not limited to file requests and file transfers, but can include any functionality from a conventional server, as stated above, and on page 7 lines 11-12 "Only requests for data are routed to data access engine 22 ..." The data access engine, as described at least on page 2 lines 27-29 "...refers to a module which contains only the part of the code which handles data access requests and the corresponding data, and does not contain the server logic and user interface." and page 2 lines 8-9 "... interacts with the data as opposed to users."

The Examiner compares the user interface of the current invention on pseudo server 28 to the first interface of Vermeulen (31 of Vermeulen's figure 3). A careful reading of Vermeulen does not find the Examiner's support, (in the Office Communication, paragraph 5, page 3 last line to page 4 first line) for a "user interface (UI) (see interface of proxy to receive client output initiated by client user..." On the contrary, Vermeulen describes that the purpose of proxy server 12, of which first interface 31 is a part, is to accept file requests from a client and return files to a client. In paragraph [0026] lines 1-11: "a control program ... containing a sequence of control instructions to perform the functions described in... FIG. 2." Vermeulen specifically describes the function of these control instructions in [0026] lines 11-15 as:

"requesting he hash code from the remote server using the address of the file requested by the client, comparing the cache contents with the hash code of the requested file, and storing the previously loaded files in the cache memory."

Applicant has, in order to expedite the prosecution, chosen to amend independent claims 21, 28, 35, and 42 in order to further clarify and emphasize the

distinctions between the device of the present invention and the device of Vermeulen cited by the Examiner. Specifically, the independent claims have been amended to clarify the separation of code between the data access engine and the pseudo server, and in particular that the pseudo server includes two components, a server-logic module for fulfilling data requests from a client and a user interface (UI) for fulfilling queries or requests originating from a client. Support for these amendments can be found in the above cited portions of the specification.

The purpose of the invention of Vermeulen, as recited in the abstract, is "a method for loading files from a distributed file system...in order to expedite renewed access to the same file" and as recited in the description of the invention, paragraph [0020] "A basic idea of the invention is to compute a hash code from a file...to check whether a file to be loaded is already contained in the cache or not." In contrast, a purpose of the current invention, as recited at least on page 6 lines 5-7 is "... to assure security while increasing communications efficiency. In other words, the present invention increases security of stored data..." which is accomplished at least in part by an innovative separation of code, as recited at least on page 6 lines 8-9 "...result from separation of the server data access engine from the corresponding server logic and interface." It would not have been obvious to one ordinarily skilled in the art at the time of the current application, to apply the method of Vermeulen for loading files to provide a feature of the current invention for increasing the security of stored data.

Also note that since submission of the current patent application, products based on the current invention have found commercial success.

Applicant submits that the base claims from which claims 22, 26-27, 29, and 33-34 depend are allowable, making the claims allowable in their present form.

Applicant believes that the above differentiation between the cited prior art and the current invention completely overcomes the Examiner's rejections on § 102(b) grounds.

§ 103(a) Rejections

The Examiner has rejected claims 23-25, 30-32, and 35-48 under 35 USC § 103(a). In view of the discussion above in the context of the § 102(b) rejections, Applicant submits that the base claims from which these claims depend are allowable, making the dependent claims allowable in their present form.

Objections

Claim 42 has been amended as per the Examiner's suggestion.

In view of the above amendments and remarks it is respectfully submitted that independent claims 21, 28, 35, and 42 and hence dependent claims 22-27, 29-34, 36-41, and 43-48 are in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

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